

NOTES AND NEWS.

CAPTAIN JOHN DONNELL SMITH has gone to Europe, for an absence of three months, in connection with his work on the Central American flora.

DR. GEO. A. REX, the leading student of Myxomycetes in this country, died recently at his home in Philadelphia. We have received no particulars.

MR. M. S. BEBB has been compelled again to go to Florida to spend the winter on account of his health. He carries with him some "willow work" and also our best wishes.

THE CURRENT CATALOGUE of Harvard University reports the herbarium as containing more than 200,000 sheets, and the botanical library over 9,000 volumes and pamphlets.

DR. W. J. BEAL has published in full his "Sugar maples of Central Michigan," read at the A. A. A. S. last summer, in the annual report of the Mich. State Board of Agriculture, vol. 33.

IN THE *J. H. U. Circular* for January (14: 25) is an account of "some rare ferns found near Baltimore," by Mr. C. E. Waters, in which is described a new variety of *Equisetum arvense* L.

M. A. FRANCHET, in continuation of his studies of the plants of Western China, publishes in *Journal de Botanique* (Nov.) four more new species of *Saussurea*, and eighteen new species of *Senecio*, twelve of which are of the *Cacalia* group.

IN A RECENT PAPER (Proc. Amer. Acad. 1894: 396) on variability in the spores of *Uredo Polypodii* (Pers.) DC., Mr. B. M. Duggar shows that the thick walled and thin walled spores simply represent different stages of maturity, the latter being the immature form.

IN MR. J. W. TOUMEY'S very interesting series of notes on the flora of the Chiricahua Mountains (Arizona), appearing in *Garden and Forest*, the second installment (Jan. 16) is accompanied by two beautiful photographic reproductions of *Pinus Chihuahuana*, and *P. latifolia*, standing in the midst of their native topography.

THE COMMITTEE of Section G, A. A. A. S. on Bibliography of American botany recommend that persons recording in a monograph or memoir a list of papers consulted repeat the author's name with each article listed, for the convenience of any who may wish to cut up the pages and make cards (either electros or prints).

PARTS 109 AND 110 of *Die natürlichen Pflanzenfamilien* are devoted to the Bignoniaceæ by K. Schumann, and the Mucorineæ, Entomophthorineæ, Hemiascineæ, Protoascineæ, Protodiscineæ, Helvellineæ, Pezizineæ, by J. Schröter. The rapidity with which this great work is appearing is a matter of congratulation to all botanists.

MR. MERRITT LYNDON FERNALD, of the Gray Herbarium, Cambridge, Mass., proposes to continue his distribution of Maine plants during the coming season. Sets will be collected to continue the series started in 1893. Collections will be made chiefly in central and southern Penobscot and Piscataquis counties, which contain hundreds of lakes, and the highest mountains of Maine.

AMONG VARIOUS notes upon *Labiatae*, published in *Bull. l'Herb. Boissier* (Dec.), M. John Briquet describes some new forms of *Mentha*. The great amount of variation of some of the species is shown by the fact that of the new forms described ten are varieties of *M. rotundifolia*, twenty-one of *M. longifolia*, nine of *M. arvensis*, six of *M. viridis*, five of *M. piperita*, and in the whole list of sixty-five new forms but eleven species are concerned.

USTILAGO MEDIANS is a new parasitic fungus occurring on barley, discovered by Herm. Biedenkopf in the neighborhood of Halle, Germany. In external characteristics, this species resembles *U. Hordei*, between which and *U. Jensenii* it occupies an intermediate position. A partial description of this fungus appears in *Zeitschrift für Pflanzenkrankheiten* 4: 321. 1894. A complete description will appear as soon as the species is thoroughly studied.—L. S. C.

IN THE December number of *Forstlichnaturwissenschaftliche Zeitschrift*, "Investigation of the morphology and anatomy of malformation upon shoots and leaves caused by the Exoasci," by W. G. Smith, is finished, and Dr. Robert Hartig has another paper on the investigations of wood entitled, "Investigations on the course of growth in oak in the Guttenberg and Grauschatz forests near Würzburg, and in the forest district Freising and Starnberg, near Munich."—L. S. C.

FASCICULUS I of a distribution of Russian fungi under the title *Jaczewski, Komarov, Tranzschel, Fungi Rossiae Exsiccati* has just appeared. It contains 50 specimens with printed labels, mounted on quarto sheets, after the manner of Thuemen's *Mycotheca*. Among the Uredineæ are such interesting specimens as *Puccinia Fergussoni* Berk. et Br., *Puccinia Eremuri* W. Kom., *Puccinia Rosæ* Barclay, *Puccinia plicata* W. Kom., *Phragmidium devastator* Sorokin, *Phragmidium circumvallatum* P. Magnus.—E. W. D. H.

MR. M. C. COOKE publishes in *Gardeners' Chronicle* (Dec. 22) an account of blindness caused by eating the fruit of a *Rhodomyrtus* in Queensland (Australia). The fruit has the botanical reputation of being not unwholesome and Mr. Cooke discovers that the probable cause of this singular effect is the presence of a *Gloeosporium*, which he describes as new. As this genus attacks many fruits it will be of interest to follow up this suggestion.

In *Hedwigia* (33: 307-337. 1894) C. Warnstorf gives a complete descriptive synopsis of all North, Central and South American species of *Sphagnum*, with the geographical distribution of each. He recognizes 15 N. Am. species of §I. ACUTIFOLIA; 2 of §II. SQUARROSA; 10 of §III. CUSPIDATA; 1 of §IV. POLCLADA; 3 of §V. RIGIDA; 14 of §VI. SUBSECUNDA; and 7 of §VII. CYMYIFOLIA; 52 species in all. Twenty-five species are found in South America only (on this continent) and

7 in Central America. Only 5 species are known from Europe not found also in America.

MR. BRADLEY M. DAVIS, in *Annals of Botany* (Dec.), describes, with colored plate, a new and very interesting alga-like organism, to which he gives the generic name *Euglenopsis*, from a certain resemblance to *Euglena*. It was found in the salt marshes near Cambridge, Mass., clinging to marsh grass and other objects on or near the surface of the water. Although not readily apparent why this organism should be considered a plant rather than an animal, Mr. Davis remarks its close affinities to certain genera usually considered as plants, and so feels justified in presenting the paper to botanists.

THE CAMBRIDGE BOTANICAL SUPPLY COMPANY, 1284 Massachusetts Ave., Cambridge, Mass., wishes early correspondence with any who are interested in an edition of the Bibliography of American Botany on cards of their own choosing, any special size or kind; an edition by subjects; an edition from which cards may be selected on special topics. The Company is also considering a plan for searching botanical literature and reporting to subscribers references on any special topic. This would be of great service to those who live out of reach of great botanical libraries and we hope help of this kind may be made available.

AT A SPECIAL meeting of the Council of the A. A. A. S., held on January 26th, it was decided to postpone the proposed meeting in San Francisco. An invitation from Springfield, Mass., to hold the meeting of 1895 in that city, was accepted. The date of the meeting was fixed as follows: Council meeting, Wednesday, August 28th, at noon; general sessions, Thursday, August 29th, at 10 A. M. Special efforts will be made by the officers of the sections to prepare programs for the sections in advance of the meeting and for this purpose members are requested to send abstracts of their papers, as early as possible, to the Permanent Secretary, or to the Secretaries of the Sections.

BOTANY at the German universities is described by Dr. George J. Peirce in *Educational Review* (Jan.). The American college for general elementary training, and the German university for training as an investigator, seems to be the approved combination. "The logically related courses in botany at our best colleges furnish a better preparation for subsequent investigation than the unarranged courses at the German universities, but in Germany the professors are able, because they are not overburdened with elementary work, to give much attention to their own researches and to the investigators under them."

MACMILLAN & Co. announce a translation of the new Strasburger, Noll, Schenck, and Schimper *Lehrbuch der Botanik*. The completeness with which the whole subject of botanical study is treated and the reputation of the authors make the announcement of this book one of unusual importance. The illustrations, some 570 in number, have been made a special feature of the book, and by arrangement with the German publishers, Macmillan & Co. are enabled to offer illustrations of the same degree of excellence as those in the German edition. The translation will be made by Dr. A. C. Porter, assistant

instructor in botany, University of Pennsylvania. Dr. Porter has been a student of Strasburger, and his long studies in Germany and personal acquaintance with all the authors of the book render him especially fitted for the work.

MR. D. M. MOTTIER has published in *Annals of Botany* (Dec.) an account of his study of the life history of *Notothylas*, *N. orbicularis* being the species used. His conclusions are: (1) the capsules possess a columella varying in size with that of the capsule; (2) the columella originates, as in *Anthoceros*, primarily in the young sporogonium with the archesporium, and independently of it, and consequently it is not a secondary differentiation within the spore-chamber; (3) the archegonium resembles more closely that of the eusporangiate ferns than does the archegonium of *Anthoceros*; (4) the antheridium arises from a hypodermal cell, a process occurring nowhere else in the whole group of bryophytes.

MESSRS. FRANK S. COLLINS, ISAAC HOLDEN, and W. A. SETCHELL announce the issue of a series of fascicles of North American algæ under the title *Phycotheca Boreali-Americana*. The fascicles will be in book form, containing fifty species each. Two fascicles will be issued this winter, of which the first has already appeared, and two or more a year will be distributed hereafter. The work will include all families of algæ, both fresh water and marine, except that no provision has yet been made for diatoms, desmids or charads; they may, however, be included later. In geographical range it will cover North America entire, from the Arctic Ocean to the Isthmus of Panama, and will include the West Indies. The edition is limited to eighty copies and subscriptions will be taken only for the series, which should find ready sale. All correspondence on the subject should be addressed to Frank S. Collins, 97 Dexter St., Malden, Mass., U. S. A.

THE *Bulletin Torr. Bot. Club* for January is devoted to taxonomy as follows: Mr. J. H. Barnhart presents an extended paper on "family nomenclature," in which the laws of priority that have been adopted for genera and species are applied, the uniform termination *aceæ* appended to the name of a recognized genus is urged, and certain limitations as to priority suggested, a list of the family names of phanerogams constructed in accordance with these suggestions being given, with full synonymy; Miss Anna Murray Vail gives a revision of the North American species of the genus *Cracca* (*Tephrosia*), fourteen in number, one of which is proposed as new; Mrs. Britton revises *Scouleria* and describes a new species (with plate); Mr. John K. Small continues his studies of the flora of the S. E. United States, describing three new species (*Juncus*, *Monniera*, and *Coreopsis*); and Mr. L. F. Henderson describes two new plants from Idaho (*Phacelia* and *Claytonia*).

PROFESSOR E. L. GREENE has given an interesting historical account of *Mimulus luteus* in the *Journal of Botany* (Jan.). It seems that the original *M. luteus* is a South American plant, and that it was unknown for a long time except through its description and figure. In the meantime a yellow *Mimulus* from North America came into notice, which by some botanists was regarded as identical with the South

American plant, by more as a distinct species, being described by DeCandolle as *M. guttatus*. In Bentham's revision of the order for the Prodrromus, however, both forms were referred to *M. luteus*, and in the Synoptical Flora this same reference was retained by Dr. Gray, several other North American forms also being included in it, but which were set apart later in the Supplement as distinct. Professor Greene finds the North and South American plants sufficiently distinct, and also discovers that *M. Langsdorfii* Don is the oldest name for the North American plant. The name *M. luteus*, therefore disappears from our flora, and *M. Langsdorfii* remains as the name of the somewhat polymorphous aggregate.

MR. J. C. WILLIS published his third paper on "gynodioecism" in *Proc. Cambridge (England) Phil. Soc.*, Nov. 1893, a paper which has just come to our hands. His further experiments indicate that the strong tendency to gynodioecism and gynomonocism shown by many plants, notably the Labiatae, seems to be a natural outcome of dichogamy, and has to do with differences of nutrition. He considers that dioecism in angiosperms is descended from hermaphroditism, and "that the sex of a seedling can to some extent be determined in advance by its conditions of nutrition." Androdioecism is found to be very rare, and seems to be certainly due to lack of nourishment of the "male plant." Cleistogamy is found to be sporadic in some plants, constant in others, varying with all sorts of external conditions. It is noteworthy that cleistogamy does not usually occur in plants that are dichogamous, or in gynodioecious genera (excepting *Salvia*). The experiments are very interesting, but it might be well to express the hope that in view of our present knowledge of morphology the constant use of sex terms in connection with sporophytic structures will be abandoned.

THE *Annals of Botany* for December might be styled an American number, as four of the six papers are by American botanists. The papers of Bradley M. Davis and D. M. Mottier are noticed elsewhere in this journal. In addition to these F. C. Newcombe writes concerning the cause and conditions of lysigenous cavity-formation, and V. M. Spalding on the traumatropic curvature of roots. Mr. Newcombe finds that the appearance of the cavity during primary growth or subsequently depends upon the retardation of extension in the tissues concerned relative to extension of more peripheral tissues; that the initial cavity-formation in primary growth is always schizogenous, and that there are always two factors concerned in cavity-formation, a schizogenous and a lysigenous; that cavity-formation during primary or secondary growth may occur in different individuals of the same species, dependent upon peripheral extension as stated above; and that the formation of a cavity during primary and secondary growth may be greatly deferred by preventing peripheral extension. Professor Spalding, in experimenting upon those phenomena following wounds to which the term traumatropism has been given, seeks to gain some definite information as to whether the phenomena are to be classed as mechanical or irritable movements. His conclusions are that the growing point of the root is sensitive, that induction follows irritation, and that traumatropic curvature is the result. All the facts in the case that have been recorded by other observers are shown to be consistent with this explanation.

THE DISENTANGLEMENT of *Quercus Texana* Buckley, by Dr. C. S. Sargent, is recorded in *Garden and Forest* (Dec. 26). Described first in the Mexican Boundary survey as a variety of *Q. coccinea*, then set apart as a species by Buckley, it was finally referred by Dr. Engelmann to *Q. rubra* as a variety, and then lost its identity completely in later writings as *Q. palustris*. At the same time a puzzling oak was known from near St. Louis and the Lower Wabash Valley, which seemed more nearly like *Q. palustris* than anything else. During a recent visit to the Lower Wabash Valley in connection with Dr. J. Schneck, Dr. Sargent recognized the form and then traced it on southwards into Texas. It seems, therefore, that *Q. Texana* is a very widely distributed oak, its range, as at present made out, extending from Minnesota, in the neighborhood of Minneapolis and St. Paul, southward through Iowa, Illinois, Indiana and Missouri, in which northern extension it is associated and confused with *Q. palustris*, and thence further southward to the Gulf, extending from Florida to Texas, and in this southern range all that has been called *Q. palustris* proves to be *Q. Texana*. In the absence of nuts the tree cannot well be distinguished from *Q. palustris*, but the nuts are more nearly those of *Q. rubra*. The bark and winter buds and leaves resemble those of *Q. coccinea*, but the leaves have the axillary tufts of hairs so characteristic of those of *Q. palustris*, a fact which doubtless explains the constant reference to that species. It would be well for botanists to look into the oaks of their vicinity and of their herbaria and see whether they do not recognize *Q. Texana*, chiefly masking as *Q. palustris*, and if so report at once to Dr. Sargent. The two plates in *Garden and Forest* will aid in ready recognition.

JUST AS THIS number is going to press we receive the sad announcement of the death on February 27th of Mr. John H. Redfield, the widely known curator of the Herbarium of the Philadelphia Academy of Sciences. Mr. Redfield was in his eightieth year. His remains were interred at Greenwood cemetery, Brooklyn.